IN THE SPECIFICATION

Please amend the Title on page 1 as follows:

HEAT EXCHANGER HAVING A TANK PARTITION WALL

Please delete the paragraphs beginning on page 6, line 19 through page 17, line 16, and amend the paragraphs beginning at page 17, line 17, through page 26, line 1, as follows:

~~With the~~ In a first embodiment of the heat exchangers ~~described in par. 1) and 2)~~, the end portions of the heat exchange tubes inserted in the inflow header project outward beyond the refrigerant passing holes of the partitioning means longitudinally of the tubes, so that the refrigerant portions flowing into the inflow header from the tubes pass over the outer edges, in the longitudinal direction, of the tubes, flow into the outflow header through the holes and are thereby mixed together. Moreover, the refrigerant flowing into the inflow header is unlikely to pass directly through the holes, therefore partly flows inside the inflow header also longitudinally thereof and is agitated at this time. Accordingly, when used as an evaporator, for example, the heat exchanger efficiently mixes the liquid-phase refrigerant portion and the vapor-phase refrigerant portion to result in a generally uniform quality of wet vapor, giving a generally uniformalized temperature to the air passing through the heat exchange core and realizing an improved refrigeration efficiency, i.e., heat exchange efficiency.

~~With~~ In a second embodiment of the heat exchanger ~~described in par. 3)~~, the refrigerant flowing into the inflow header from the heat exchange tubes is prevented from flowing directly into the outflow header through the refrigerant passing holes. This further improves the refrigerant mixing effect described with reference to ~~par. 1) and 2)~~ the first embodiment. Consequently, when used as an evaporator, for example, the heat exchanger efficiently mixes the liquid-phase refrigerant portion and the vapor-phase refrigerant portion to result in a generally uniform quality of wet vapor, giving a generally more uniformalized temperature to the air passing through the heat exchange core and realizing an improved refrigeration efficiency.

~~With~~ In a third embodiment of the heat exchanger ~~described in par. 4)~~, the refrigerant portions flowing into the outflow header through the refrigerant holes are mixed together also inside the outflow header, with the result that when used as an evaporator, for example, the heat exchanger efficiently mixes the liquid-phase refrigerant portion and the vapor-phase refrigerant portion to result in a generally uniform quality of wet vapor, giving a generally more uniformalized temperature to the air passing through the heat exchange core and realizing an improved refrigeration efficiency.

In another embodiment, [[The]] the function of the partitioning means provided in the heat exchanger described ~~in par. 5)~~ permits the refrigerant to flow through all the heat exchange tubes joined to the inlet header of the inlet-outlet tank at a uniformalized rate, enabling the exchanger to exhibit improved heat exchange performance.

In another embodiment, [[The]] the partitioning means of the turn tank of the heat exchanger described in par. 6) is integral with the second member. The partitioning means is therefore easy to provide inside the turn tank.

~~The heat exchanger described in par. 7) has the same advantages as the heat exchanger described in par. 1).~~

In another embodiment, [[The]] the heat exchanger described ~~in par. 8)~~ has a refrigerant inlet at one end of the inlet header and a refrigerant outlet at one end thereof alongside the refrigerant inlet. In such a case, the refrigerant portions flowing from the inlet header into the inflow header via heat exchange tubes will not be fully mixed, while the rate of flow of the refrigerant through all the heat exchange tubes of each tube group will be liable to become uneven. Even in this case, however, the exchanger described achieves a high refrigerant mixing efficiency, enabling the refrigerant to flow through all the tubes at a uniformalized rate.

~~With~~ In another embodiment of the heat exchanger ~~described in par. 9)~~, the separating means functions to uniformalize the rate of flow of the refrigerant through all the heat exchange tubes joined to the inlet header, also uniformalizing the rate of flow of the refrigerant through all the heat exchange tubes joined to the outlet header. The heat exchanger therefore exhibits further improved heat exchange performance.

~~The structure described in par. 10)~~ Another embodiment of the invention, serves to reduce the number of components of the overall heat exchanger.

~~With~~ In another embodiment of the heat exchanger ~~described in par. 11)~~, the inlet-outlet tank partitioning means and separating means are integral with the second member. This ensures facilitated work in providing the partitioning means and the separating means in the interior of the inlet-outlet tank.

~~When~~ In an embodiment, the heat exchange tubes of each tube group is at least seven in number ~~as in the heat exchanger described in par. 12)~~, the refrigerant portions flowing from the inlet header into the inflow header through the heat exchange tubes will not be mixed together sufficiently, and the rate of flow of the refrigerant through all the tubes of each group is liable to become uneven. Even in such a case, however, the refrigerant portions can be mixed efficiently, while the refrigerant flows through all the heat exchange tubes at a uniformalized rate.

~~The heat exchanger described in par. 13) has the same advantages as the exchanger described in par. 1).~~

~~With~~ In another embodiment of the heat exchanger ~~described in par. 14)~~, the refrigerant portions flowing into the inflow header through the heat exchange tubes will not be mixed together sufficiently, and the rate of flow of the refrigerant through all the tubes of each group is liable to become uneven. Even in such a case, however, the structure immediately above ~~described in par. 13)~~ ensures efficient mixing of the refrigerant portions, further permitting the refrigerant to flow through all the heat exchange tubes at a uniformalized rate.

~~With~~ In another embodiment of the heat exchanger ~~described in par. 15)~~, the partitioning means is integral with the second member. The partitioning means is therefore easy to provide inside the tank.

Another embodiment of [[The]] the heat exchanger ~~described in par. 16)~~ is reduced in the number of components in its entirety.

~~The structure described in par. 17)~~ Another embodiment ensures facilitated work in providing the partitioning means in the hollow body.

If the heat exchange tubes joined to each of the inflow header and the outflow header are at least seven in number ~~as is the case with the heat exchanger described in par. 18)~~, the refrigerant portions flowing into the inflow header through the heat exchange tubes will not be mixed together sufficiently, and the rate of flow of the refrigerant through these tubes is liable to become uneven. Even in such a case, however, the refrigerant portions can be mixed efficiently, while the refrigerant flows through all the heat exchange tubes at a uniformalized rate.

~~With~~ In another embodiment of the heat exchanger ~~described in par. 21) to 25)~~, the refrigerant passing holes in the separating means of the outlet header are positioned between respective adjacent pairs of heat exchange tubes arranged longitudinally of the outlet header and included in the group of heat exchange tubes joined to the outlet header. Accordingly, the refrigerant flowing out of the tubes comes into contact with the separating means without passing directly through the refrigerant holes to flow inside the outlet header also longitudinally thereof. The refrigerant portions flowing out from all the tubes are therefore mixed together. When the exchanger is used as an evaporator, it is likely that the refrigerant will pass through some heat exchange tubes without completely vaporizing and become lower in temperature. Even in such a case, the refrigerant to be admitted into the expansion valve through the refrigerant outlet is given a relatively high uniform temperature since the refrigerant portions from all heat exchange tubes are mixed together. Consequently, a reduction of the expansion valve opening is prevented to avoid the decrease in the flow of refrigerant, diminishing the region of superheat to result in improved refrigeration performance, i.e., improved heat exchange performance.

~~With~~ In another embodiment of the heat exchanger ~~described in par. 26)~~, the refrigerant passing holes are positioned on the upstream side with respect to the direction of flow of air, so that a larger amount of refrigerant flows on the upstream side. This leads to improved refrigeration performance when the exchanger is used as an evaporator, hence a remarkable advantage in the case where the evaporator has a large front-rear width.

When the heat exchange tubes joined to the outlet header are at least ten in number ~~as is the case with the heat exchanger described in par. 27)~~, a wider region of superheat is likely to result if the exchanger is used as an evaporator. Even in such a case, however, the construction described immediately above ~~in par. 21)~~ precludes an increase of the superheat region.

The heat exchanger described in par. 28) can be reduced in the number of components in its entirety.

~~With~~ In another embodiment of the heat exchanger ~~described in par. 29)~~, the separating means and the partitioning means of the inlet-outlet tank are integral with the second member. This results in facilitated work in providing the separating means and the partitioning means in the interior of the inlet-outlet tank.

While the refrigerant admitted into the inlet header from a refrigerant inlet flows to a refrigerant outlet of the outlet header in one embodiment ~~the heat exchanger described in par. 32)~~, the refrigerant flowing into the inflow header at the left from heat exchange tubes flows through the left inflow header longitudinally thereof into the outflow header at the right, then flows through heat exchange tubes into the outlet header. On the other hand, the refrigerant flowing into the inflow header at the right from heat exchange tubes flows through the right inflow header

longitudinally thereof into the outflow header at the left, then flows through heat exchange tubes into the outlet header and flows out through the refrigerant outlet. Accordingly, the paths of flow of the refrigerant through the heat exchanger are given equal lengths unlike those described in the aforementioned publication, consequently resulting in a uniform pressure distribution and permitting the refrigerant to pass through all the heat exchange tubes at a uniform rate. This uniformalizes the temperature of the air passing through the heat exchange core. In the case where the refrigerant flows through the heat exchange tubes joined to the left inflow header at a reduced rate, and flows through the heat exchange tubes joined to the right inflow header at an increased rate, the rate of flow of the refrigerant through the tubes joined to the left outflow header increases, and the rate of flow of the refrigerant through the tubes joined to the right outflow header decreases. Conversely in the case where the refrigerant flows through the heat exchange tubes joined to the left inflow header an increased rate, and flows through the heat exchange tubes joined to the right inflow header at a reduced rate, the rate of flow of the refrigerant through the tubes joined to the left outflow header decreases, and the rate of flow of the refrigerant through the tubes joined to the right outflow header increases. This uniformalizes the amount of refrigerant contributing to heat exchange with respect to the left-right direction of the heat exchange core, consequently giving a generally uniform temperature to the air passing through the core. Further when the refrigerant as admitted to the left inflow header flows into the right outflow header, and also when the refrigerant flows from the right inflow header into the left outflow header, these refrigerant portions are mixed together efficiently. Accordingly, when used as an evaporator, the heat exchanger efficiently mixes the liquid-phase refrigerant portion and the vapor-phase

refrigerant portion to result in a generally uniform quality of wet vapor, giving a generally uniformalized temperature to the air passing through the heat exchange core and realizing a remarkably improved refrigeration efficiency, i.e., heat exchange efficiency.

When the inlet header has a refrigerant inlet at one end thereof, with the outlet header provided with a refrigerant outlet at its one end alongside the inlet end ~~as in the heat exchanger described in par. 33)~~, the evaporator disclosed in the foregoing publication has a marked tendency for a large amount of refrigerant to flow through heat exchange tubes which are positioned in the vicinity of the refrigerant inlet and outlet and included in the front and rear heat exchange tubes, with a reduced amount of refrigerant flowing through the other heat exchange tubes. Even in such a case, the heat exchanger so constructed as described~~ in par. 32)~~ immediately exhibits the advantages described above ~~with reference to the exchanger of par. 32)~~.

~~The heat exchanger described in par. 34) can be reduced in the number of components of the entire heat exchanger.~~

~~With~~ In another embodiment of the heat exchangers ~~described in par. 35) to 37)~~, a relatively simple construction is usable for causing the left inflow header to communicate with the right outflow header and the right inflow header to communicate with the left outflow header.

In another embodiment, [[The]] the heat exchanger ~~described in par. 38)~~ can be smaller in the number of components, and can be provided with the partitioning means in the tank with ease.

In the case where each tube group comprises at least seven heat exchange tubes ~~as in the heat exchanger described in par. 39)~~, the evaporator disclosed in the

foregoing publication has a strong tendency for a large amount of refrigerant to flow through heat exchange tubes which are positioned in the vicinity of the refrigerant inlet and outlet and included in the front and rear heat exchange tubes, with a reduced amount of refrigerant flowing through the other heat exchange tubes. Even in such a case, the heat exchanger so constructed as described ~~in par. 32)~~ above exhibits the advantages described with reference to the exchanger ~~of par. 32)~~ described above.

Please delete the Abstract on page 77 and replace with the following Abstract: